

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: KUO, Terry B.J.; YANG, Cheryl C.H.

SERIAL NO.: 10/790,508

ART UNIT: 3762

FILED: March 1, 2004

EXAMINER: Greene, D. D.

TITLE: METHOD AND APPARATUS FOR ANALYZING HEART RATE VARIABILITY

Amendment A: CLAIM AMENDMENTS

Claims 1 - 16 (canceled). These claims are canceled by the present amendment.

17. (new) A method of analyzing heart rate variability comprising the steps of:

capturing an electrocardiogram signal of a person;

performing an analog-to-digital conversion of said electrocardiogram signal;

selecting peaks of said electrocardiogram signal;

calculating a standard deviation of heights or durations of the peaks;

removing the peaks having heights or durations that exceed a first predetermined standard deviation;

calculating peak-to-peak intervals of said electrocardiogram signal;

filtering out unqualified peak-to-peak intervals;

sampling and interpolating qualified peaks and the peak-to-peak intervals so as to form consecutive peak signals; and

performing a spectrum analysis upon the consecutive peak signals in a frequency domain.

18. (new) The method of Claim 17, said first standard deviation being substantially equivalent to three standard deviations.

19. (new) The method of Claim 17, the step of filtering out comprising the steps of:

calculating a standard deviation of the peak-to-peak intervals of said electrocardiogram signal; and

removing the peak-to-peak intervals that exceed a second predetermined standard deviation.

20. (new) The method of Claim 19, said second predetermined standard deviation being substantially equivalent to three standard deviations.

21. (new) The method of Claim 17, wherein each of the steps is accomplished by a button-inputted command.

22. (new) The method of Claim 17, further comprising the step of:

checking to determine if the sampling data is sufficient.

23. (new) The method of Claim 17, further comprising:

displaying a result of the spectrum analysis.

24. (new) The method of Claim 23, said step of displaying comprising:

printing out the result.

25. (new) The method of Claim 17, the peaks being QRS waves.